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| VO. T EXAMINER | |
| | |
| ART UNIT | PAPER NUMBER |
| 3402 | 14 |

DATE MAILED:

03/10/98

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/951,754

Applicant(s)

KOHRT

Examiner

HIEU T. VO

Group Art Unit

3402

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 01/21/98
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-31 is/are pending in the application.
- Of the above claim(s) 21-26 and 28-31 are pending interference ~~is/are withdrawn from consideration.~~
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-20, 27 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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DETAILED ACTION

Withdrawal of Finality of Last Office Action

1. Upon receiving the Amendment under 37 CFR § 1.607 filed on 01/21/1998, the Finality of last Office Action which mailed on 02/04/98 is withdrawn.

2. Claims 21-26 and 28-31 of this application (08/951,754) have been copied by the applicant from U.S. Patent No. 5,595,164 issued 01/21/1997 for interference purpose which will be addressed after the resolution of claims 1-20.

Claim Rejections - 35 U.S.C. § 112

3. Claims 27 is rejected under 35 U.S.C. 112, first paragraph, as containing new subject matter which was not described in the specification and shown in the drawings in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Accordingly, the claimed of C-shaped mounting element having insulating members associated therewith and said insulating members connected to said heating element introduced a new subject matter (e.g. insulating members) which is not described in the original specification or shown in the drawings.

4. Claims 1-5 and 15-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 last seven lines contains no structure but merely functional language.

Claim 15 last five lines contains no structure but merely functional language.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. of U.S. Pat. 4,685,437.

Tanaka et al. disclose an air heater 1 including:

a heater frame (col. 5 lines 10-30);

a heater element (col. 6 lines 19-23);

a flange portion around the frame member (fig. 1,2,5,6, etc.)

Regarding to “compressive positioning adjacent the cylinder head mounting surface” in the claims, the examiner has interpreted that Fig. 4 of the patent to Tanaka et al. does show such “compressive positioning”. It is noted that the claims do not include any specific structure to produce such claimed “compressive positioning”.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. of U.S. Pat. 4,685,437 in view of Berg of U.S. Pat. 4,465,053.

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Tanaka et al. teach an air intake heater 1 which has heater elements 12,13 mount on a frame member 2,3, an electric connector to connect to electrical source. Berg, however, shows an intake air heater 10 with electrical resistance heater elements, an electric connector 44 to connect to electrical source. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the air intake heater of Tanaka et al. with the electrical resistance heater of Berg for easy warm up the engine during cold start.

7. Claims 6-8,10-12, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cailey of U.S. Pat 4,926,812 in view of Tanaka et al. of U.S. Pat. 4,685,437

Regarding claims 6-8, Cailey teaches a cylinder head 12 with top and bottom surface, an intake manifold 18 (fig. 2). However, Tanaka et al. shows an intake manifold 50 with an intake air heater 1 (fig. 4). Therefore, to provide the intake manifold of Cailey with the intake air heater of Tanaka et al. to reduce the size of the engine.

With regard to claims 10-12, Tanaka et al. disclose an intake air heater with heater elements which are supported by frame member, flange portion around the heater frame, an electrical connector.

With regard to claims 14 and 19, Cailey teaches an air delivery conduit (fig. 2) which is abutted against cylinder head through the flange portion (element 44), bolt holes (element 42).

8. Claims 9, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cailey of U.S. Pat. 4,926,812 in view of Tanaka et al. of U. S. Pat. 4,685,437 as applied to claim 6-7 above, and further in view of Berg of U.S. Pat. 4, 465,053.

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Berg teaches an intake air heater with electrical resistance heater element, an electrical connector to connect electrical resistance heater element to electrical source. Therefore, it would have been to one of ordinary skill in the art at the time the invention was made to provide the air intake heater of Tanaka et al. with the electrical resistance heater of Berg for easy warm up the engine during cold start.

9. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cailey of U.S. Pat. 4,962,812 in view of Tanaka et al. U.S. Pat. 4,685,437.

Cailey teaches a cylinder head with top and bottom surface, an intake manifold, an air delivery conduit (fig. 2). However, Tanaka et al. shows an intake manifold with an intake air heater which has heater elements are supported by heater frame (fig. 4). Therefore, to provide the intake manifold of Cailey with the intake manifold of Tanaka et al. to reduce the size of the engine.

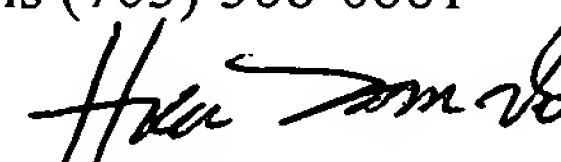
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Hieu T. Vo whose telephone number is (703) 305-6800. The examiner can normally be reached on Monday through Friday from 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen, can be reached on (703) 308-1946. The fax phone number for this group is (703) 308-7764.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861

HTV
February 25, 1998


HENRY YUEN
SUPERVISORY PATENT EXAMINER
GROUP 3400


HIEU T. VO
Patent Examiner
Art Unit 3402